

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: AKIRA ISHIBASHI et.al. ATTY. DOCKET NO. P98,3017
SERIAL NO.: 09/210,539 GROUP ART UNIT: 1713
FILED: December 14, 1998 EXAMINER: K. Egwim
FOR: "FORMED ARTICLE OF BIODEGRADABLE RESIN"

Assistant Commissioner for Patents
Washington, D.C. 20231

AMENDMENT A

Dear Sir:

This is in response to the Official Action, Paper No. 5, mailed March 28, 2000.

I. THE OFFICIAL ACTION SUMMARIZED

In the above-identified Official Action, the Information Disclosure Statement was objected to for purported failure to submit all items mentioned therein and failure to provide dates for two non-patent documents submitted for review.

In regard to the specification, the Abstract of the Disclosure was commented upon, but not objected to.

In regard to the title of the invention, a new title was required, with the following suggestion being made: "ARTICLES FORMED FROM BIODEGRADABLE ALIPHATIC POLYESTER RESINS HAVING DISPERSED POLYLACTIC ACID".

In regard to objections pursuant to §112, claim 1 was objected to based upon punctuation. The required amendment is set forth hereinbelow.

On the art, claims 1-2 and 9-11 were rejected under 35 U.S.C. §102(e) as being anticipated by or, in the alternative, 35 U.S.C. §103(a) as being obvious over Tsai et al. (U.S. Patent No. 5,910,545) and with the comments:

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"Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Obuchi et al. (USPN 5,916,950).

In col. 1, lines 6-15, Tsai et al. teach fibers made from a biodegradable resin. In col. 4, lines 10-66 and col. 8, line 60 to col. 9, line 13, Tsai et al. teach the biodegradable resin to comprise a 0 to 100% of polylactic acid and 0 to 100% of a butylene succinate polymer, wherein, because the polymers form separate domains, the polymer in the greater quantity would constitute the continuous phase and the polymer in minimized quantities would constitute the discontinuous phase dispersed within the continuous phase. The biodegradable resin with the presently claimed composition is exemplified in col. 19 with samples 14 and 15 of table 3."

Additionally, claims 1-6 and 8-11 were rejected under 35 U.S.C. §102(e) as being anticipated by or in the alternative 35 U.S.C. §103(a) as being unpatentable over Obuchi et al. (U.S. Patent No. 5,916,950, and based on the following comments:

"In col. 4, lines 13-21, col. 6, lines 41-53, and col. 9, lines 3-45, Obuchi et al. teach a variety of articles, including tying material, made from a thermoplastic composition comprising a biodegradable resin containing 25-75% of polylactic acid and 25-75% of a butylene succinate polymer. In col. 7, lines 24-34, Obuchi et al. teach the resin to further contain 0.1-70 parts of inorganic filler comprising talc. The biodegradable resin with the presently claimed composition is exemplified in preparation

example 2, and example 11 of table 1, wherein the polylactic acid is described as being in the form of a pellet or powder.

While Tsai et al. or Obuchi et al. do not expressly disclosed the dispersed polylactic acid to be in the form of particles within the continuous phase of the formed article, the polylactic acid would intrinsically have been in the form of solid particulate, given the molecular weights. Further, while Tsai et al. or Obuchi et al do not disclose the specific diameters of the dispersed polylactic acid, the particle diameters claimed by applicant would have been within the range of particle diameters for the dispersed polylactic acid in the prior art, given that the compositional ranges overlap in scope. As such, the compositions of Tsai et al. or Obuchi et al. are essentially the same as the claimed composition. In any event, an otherwise old composition is not patentable regardless of any new or unexpected utility of properties. See *Ex parte Lee*, 31 USPQ 2d 1105 (Bd. Pat App. & Inter. 1993) or *In re Fitzgerald et al.* 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP §2112-§2112.02 and §2131.03.

Even if assuming that the prior art references do not meet the requirements of 35 U.S.C. 102, it would still have been obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the same inventive composition because the disclosure of the inventive subject matter appears within the generic disclosure of the prior art.”

In addition, claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over the proposed combination of Obuchi et al. and further in view of Yamada et al. (JP 09041220), and with the following comments:

“Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Obuchi et al. as applied to claims 1-6 and 8-11 above, and further in view of Yamada et al. (JP 09041220). Obuchi et al., above, differ from the claimed invention in that the inorganic additive component is not disclose to be calcium carbonate. However, it is known in the art to use calcium carbonate as a species of inorganic additives for the biodegradable polyester resin of Obuchi et al., such as taught by Yamada et al.

In the abstract, Yamada et al. teach inorganic additives for the biodegradable polyester resins to include calcium carbonate. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use calcium carbonate as an inorganic filler/additive in the biodegradable polyester resin of Obuchi et al. because 1) Obuchi et al. teach inorganic fillers, 2) Yamada et al. teach calcium carbonate as a species of inorganic filler/additive, and 3) one having ordinary skill in the art, at the time the invention was made, would have been motivated by a reasonable expectation of success to use calcium carbonate as an inorganic filler in the biodegradable polyester resin of Obuchi et al.

Claim 3-8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. as applied to claims 1-2 and 9-11 above, and further in view of Obuchi et al. and Yamada et al. above.

Tsai et al. differ from the claimed invention in that the biodegradable polyester resin is not disclosed as comprising an inorganic filler such as talc or calcium carbonate. However, it is known in the art to add an inorganic filler such as talc to a biodegradable polyester resin, for the purpose of reducing molding time and accelerating crystallization velocity in the molding operation, such as taught by Obuchi et al. above (See col. 7, lines 24-33).

It is also known in the art to use calcium carbonate as a species of inorganic filler for biodegradable polyester resins, such as taught by Yamada et al., above (See abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to include an inorganic filler such as talc in the biodegradable polyester resin of Tsai et al. in order to obtain the advantages taught by Obuchi et al. motivated by a reasonable expectation of success.

In addition, one having ordinary skill in the art, at the time the invention was made, would have been motivated by a reasonable expectation of success to use calcium carbonate as an inorganic filler in the biodegradable polyester resin of